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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,807	02/15/2005	Joseph J Keenan	BA9309USPCT	1657
David E Heiser E. I. Du Pont de Nemours and Company Legal Patent Records Center 4417 Lancaster Pike Wilmington, DE 19805				
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EXAMINER				
SULLIVAN, DANIELLE D				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,807

Applicant(s)

KEENAN ET AL.

Examiner

DANIELLE SULLIVAN

Art Unit

1616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-25 and 27-37 is/are rejected.
- 7) ☒ Claim(s) 8 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claims 1-37 are pending examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-12, 15-25, 27-33, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al. (US 5,474,971), herein '971', in view of Riebel et al. (US 5,270,288).

Applicant's Invention

Applicant claims a process of preparing a paste-extruded sulfonamide herbicide, which comprises from (2 to 90%) one or more of the free acid form of a sulfonamide herbicide (not salts), (0 to 95%) one or more additives, base selected from an inorganic base (50-100 equivalent %) and sufficient water to form a paste (page 2, line 34-page 3, line 11). The mixture is prepared through a die or screen to form an extrudate and dried. Claims 4-8, 22-26, 31 and 33-35 limit it to being selected from sodium carbonate and sodium phosphate. Claims 10-12, 19, 33 and 37 specify the sulfonamide herbicide being selected from bensulfuron methyl, chlorimuron ethyl and chlorsulfuron. Claims 2, 3, 15, 20, 21 and 28 specify the base is at least about 50, 75 and 100 equivalent %.

Claims 9, 27 and 32 further limit the composition to comprising from about 0.5 to about 50% by weight of a saccharide, preferably a disaccharide. Claim 18 specifies the active is not a sulfonamide. Claims 15 and 20 further add 1-20% of a surfactant and 0.5-94% of a saccharide. Claims 16 and 29 further add a step of sifting the dried extrudate.

Applicant also claims the product obtained by the process.

Determination of the scope and the content of the prior art
(MPEP 2141.01)

'971' teaches a process for preparing a rapidly disintegrating water-dispersible granular composition, comprising extruding a premix through a die or screen at elevated temperature without using any water (column 1, lines 37-38 and 56-59). However, granules are also taught as being made by adding water to form an extrudable wet mix, breaking the product into granules and the optionally drying (column 1, lines 24-27).

'971' teaches a process comprising extruding a dry premix comprising by weight (0.01-90%) of one or more active ingredients, (1-60%) one or more diluents, (0-30%) binders and two or more additives (ranging 0-80%) through a die to form granules (column 4, lines 25-45). Diluents include the disaccharide lactose (column 2, lines 27-31). The active ingredients include sulfonamides, such as sulfometron-methyl as well as herbicides other than sulfonamides (column 10, Table 1, Compound No. 63). '971' also teaches sodium and ammonium phosphates and sodium and potassium carbonates as optional additives/anticaking additive/gas generating agents (column 14, lines 24-26 and 39-40). '971' further teaches conventional methods for preparing water-dispersible granule compositions which includes the **extrusion of a water-wet paste**

(column 3, lines 59-62). The step of sifting the dried extrudate is not disclosed, but sifting is a step commonly used in processes in order to remove excess dusts and products that are too small in size for retail purposes and '971' teaches that the granules have uniform size (column 1, lines 20-22).

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

Sandell et al. fails to teach at least about equivalent 50% of base. However, the presence of base is disclosed by Sandell et al. Since, the equivalent % of base is a relative term which is not based on the % weight of the composition obtained the measured equivalent % of base would be relative to the amount of other ingredients used. Since, the active ingredient ranges from 0.01-90% of the composition, the anticaking agents range from 0-10% and the gas generating agents may range from 0-20% of the composition. Therefore, it is within the skill of one in the art to adjust the individual components in the invention. Furthermore, in view of In re Aller, Lacey and Hall, 105 USPQ 233 (C.C.P.A. 1955), applicant has the burden of proving critical ranges necessary to impart patentability against the prior art.

**Finding of prima facie obviousness
Rationale and Motivation (MPEP 2142-2143)**

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of '971' to include preparing a composition as a water wet extrudable paste since '971' teaches a process for preparing extrudable water

wet pastes and drying the granules. Therefore, one would have been motivated in view of KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007) to use the same components in a method comprising the step of forming a water wet paste.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of '971' to include equivalent 50% of base in the composition. One would have been motivated to manipulate ranges during routine experimentation to discover the optimum or workable range since the '971' provides the general range. Therefore, one would have been motivated to use the appropriate amount of base relative to the amount of other ingredients used in the process.

Response to Arguments

Applicant's arguments filed 7/14/2009 have been fully considered but they are not persuasive. Applicants argue Sandell's mention of extrusion of a water-wet paste is in the context of contrasting them to the heat extrusion presented therein. Applicant argues one skilled in the art would recognize that the premix characteristics presented in Sandell relate to premix specifically designed for the heat extrusion process described therein. Hence, Applicants conclude that one of ordinary skill in the art would not choose certain features for the heat extrusion technology and selectively transfer those features to a very different paste extrusion technology.

The Examiner disagrees with this conclusion. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been

predictable to one of ordinary skill in the art. Sandell teaches that it is known to utilize water to make an extrudable wet mix. Hence, it would have been obvious to prepare a formulation comprising the composition of claim 1 formulated into a water wet paste since the problem to be solved is the same, namely, the preparation of a water dispersible particle.

Applicants argue Sandell does not generally teach that one should choose the optional additives cited when the active is a sulfonamide herbicide acid. The Examiner is not persuaded by this argument. In view of Pfizer, Inc. v. Apotex, Inc., 480 F.3d 1348, 82 USPQ2d 1321 (Fed. Cir. 2007), 'suggestion, teaching or motivation does not have to be explicit and "may be found in an number of sources, including common knowledge, the prior art as a whole or the nature of the problem itself", citing Dystar Textilfarben GMBH v. C.H. Patrick Col., 464 F.3d 1356 (Fed. Cir. 2006)'. Sandell teach the premix comprises 0-10% anticaking agent selected from sodium phosphate and 0-20% gas generating agents selected from sodium and potassium bicarbonates and carbonates. Hence, it would have been obvious to one of ordinary skill in the art to choose from a finite number, the specific additives to obtain a predictable result.

Applicants argument with respect to the docecahydrate form of sodium phosphate has been found convincing.

Allowable Subject Matter

Claims 8 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13, 14, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al. (US 5,474,971), herein '971', in view of Riebel et al. (US 5,270,288).

Applicant's Invention

Applicant claims a process as addressed in above. Claims 13 and 34 further limit the herbicide to thifensulfuron-methyl and the base to sodium carbonate. Claims 14 and 35 limit the herbicide to tribenuron-methyl and the base to sodium carbonate.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

The teachings of '971' are addressed in above 103 rejection.

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

'971' does not teach the sulfonamides thifensulfuron-methyl and tribenuron-methyl. However, various other sulfonamides are taught such as, bensulfuron methyl, chlorimuron ethyl and chlorsulfuron (See Table 1, Compounds 4, 9 and 11, column 6).

'971' discloses that one or more active ingredients, including herbicides, may be used in combination with other herbicidally active ingredients. It is for this reason that Reibel et al. is combined.

Reibel et al. teach the combination of arylsulphonylureas with the sulfonamides which includes thifensulfuron-methyl and tribenuron-methyl in formulated pastes (column 1, lines 6-16; column 4, line 32; column 5, lines 57 and 58).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of '971' with Reibel et al. to further include the sulfonamides thifensulfuron-methyl and tribenuron-methyl. One would have been motivated to include a thifensulfuron-methyl and tribenuron-methyl because Riebel et al. teach that they are sulfonamides and may be formulated into pastes.

Response to Arguments

Applicant's arguments filed 7/14/2009 have been fully considered but they are not persuasive.

Applicants argue that Reibel et al. reference to 'pastes' would be understood by one of ordinary skill to refer to a paste formulation suitable for distribution as a herbicide rather than a paste used for the preparation of a dried paste-extruded extrudate. The Examiner is not persuaded by this argument. Applicant is arguing that the intended use

of the paste is different. However, if the prior art structure is capable of performing the intended use, then it meets the claim. Since Reibel et al. teach that pastes may be utilized to formulate water-dispersible sulphonylureas, including thifensulfuron-methyl, the process of formulating a paste is obvious.

Claims 13, 14, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandell et al. (US 5,474,971), herein '971' in further view of Sandell (US 5,714,157), herein '157'.

Applicant's Invention

Applicant claims a process as addressed in above. Claims 13 and 34 further limit the herbicide to thifensulfuron-methyl and the base to sodium carbonate. Claims 14 and 35 limit the herbicide to tribenuron-methyl and the base to sodium carbonate.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

The teachings of '971' are addressed in above 103 rejection.

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

'971' does not teach the sulfonamides thifensulfuron-methyl and tribenuron-methyl. However, various other sulfonamides are taught such as, bensulfuron methyl, chlorimuron ethyl and chlorsulfuron (See Table 1, Compounds 4, 9 and 11, column 6). '971' discloses that one or more active ingredients, including herbicides, may be used in

combination with other herbicidally active ingredients. It is for this reason that '157' is combined.

'157' teaches compositions comprising one or more active ingredients selected from sulfonylurea class of herbicides including sulfometuron methyl, thifensulfuron-methyl, tribenuron-methyl (column 2, lines 15-17; column 4, lines 10-12; Examples 14, 15, 20 and 21).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of '971' and '157' to further include the sulfonamides thifensulfuron-methyl and tribenuron-methyl. One would have been motivated to include a thifensulfuron-methyl and tribenuron-methyl because Riebel et al. teach that they are sulfonamides and may be formulated into pastes.

Response to Arguments

Applicant's arguments filed 7/14/2009 have been fully considered but they are not persuasive.

Applicants argue that Sandell et al. teach a product based on heat extrusion and that Sandell does not teach the premix is suitable for other process, such as those which include the extrusion of a water-wet paste. The Examiner is not persuaded by this argument. Sandell et al. teach conventional methods of preparing granules were known via the steps of a) water spraying the equipment, b) spray-drying, c) extrusion of

a water wet paste and d) dry compaction (column 2, lines 55-65). Hence, simple substitution of the composition disclosed in Sandell in the process of Sandell et al. render the claims prima facie obvious. Applying a known technique to a known product ready for improvement to yield predictable results is prima facie obvious.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DANIELLE SULLIVAN** whose telephone number is (571)270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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